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ABSTRACT

Every person can and should be instructed in critical thinking to the limits of his or her abilities and capabilities. No one strategy will fit all individuals at all levels, but strategies can be developed, directed by a single goal, that will be adaptable enough to respond to changing cultural conditions and educational necessities. Infusing critical skills should begin as early as possible in the educational and developmental process and should continue throughout the individual's school and adult life. Texts for students presently in secondary school and college can be modified once all students have had critical thinking skills instruction in elementary schools, so that more complex concepts and approaches can be introduced. Continuing education for adults should be supplemented by support for the changes many adults will need to make in their thinking habits. Because today's schools are not equipped to provide training in critical thinking, centers should be set up to conduct the training programs, workshops, and seminars for adults. Such a place could also be a networking center for information on critical thinking issues. The Ohio Center for Critical Thinking Instruction, incorporated in January 1994, will be a prototype center for critical thinking instruction. (SLD)

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STRATEGIES FOR INFUSING CRITICAL THINKING INTO A CULTURE

Supporting paper for conference session

STRATEGIES FOR IMPLEMENTING CRITICAL THINKING

NCECT
Critical Thinking and Educational Reform Conference
Sonoma State University, California
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Who should be taught Critical Thinking Skills?

The target population falls directly out of the first premise: the general population. And from the third and fourth premises, we can conclude that every person can and should be instructed in critical thinking skills to the limits of his/her abilities and capabilities. No other limitations (i.e. only the rich, only the gifted) can be rationally justified.

But 'general population' is misleadingly simplistic since any natural population is criss-crossed by categorical groups defined by race, religion, socio-economic status, 'intellectual capabilities', age, gender, etc. It seems most natural, when discussing education across a heterogeneous population, to divide by age, and then by educational background, which includes individual capability, capacity and accomplishment. In the following analysis, I consider three distinct groups: elementary or early childhood, secondary/college level and post-graduate/adult. In regard to these three groups, the 'how' and 'where' changes over time ('when') and so their respective strategies must also change. **Thus, there can be no one strategy to fit all individuals at all levels.** Rather, we must develop strategies directed by a single goal, strategies which are pliable and adaptable enough to be able to respond to constantly changing cultural conditions and to the educational necessities of both today and tomorrow.

It is obvious that simply introducing critical thinking skills at the elementary level will have a ripple effect upon all facets of future education. Teaching materials and methodologies as well as student textbooks (for each grade level) will need to be continually revised as each new incoming class of students will be (at least theoretically and on the average) more practiced and so more accomplished than their predecessors. Indeed, those children who will have begun practicing and using critical thinking skills in the 1st grade (or earlier) will not only have more experience with the skills themselves, but will have also gained substantially more from their 'normal' course materials.

These last points indicate another reason **that all individuals must be educated as equally as possible:** there may develop a significant (non-trivial) 'gap' between any group not educated with these skills and these tools and with the deeper and broader understanding which

reflective, disciplined and reasoned thinking can produce. It is very probable that those children educated with and using critical thinking skills may come to possess a significant 'life' advantage over those not so educated. **And it is possible that this gap could prove to be equally as destructive of the culture as the infusion of critical thinking skills in education could be beneficial.**

Thus, a strategy to infuse critical thinking skills at any level, to any group, must be accompanied by strategies to infuse these same skills at all levels and to all groups. How will a democracy survive if only the politicians and leaders are given these skills? How will parents raise their children if they do not possess the thinking skills which their children are bringing home from school? How can someone not trained in critical thinking survive in a job market, competing against those who have been trained in them since childhood? How can a people be a democratic society if they cannot, as individuals, consider and make reasoned judgements concerning principal and consequential cultural issues?

When should Critical Thinking Skills be infused?

The obvious answer for this is: *As early as possible in the educational and developmental process of the individual, and then further studies should be paced throughout the individual's remaining school and adult life.*

EARLY CHILDHOOD and ELEMENTARY:

Arguments may be raised that philosophical concepts cannot be grasped by young children, and this is perhaps true of the abstract concepts. But such an argument does not preclude us from introducing the practical skills of listening, speaking, reflecting and discussing critically to elementary and even pre-elementary children. Indeed, these are not complex skills obtainable by only the 'superior' or 'gifted' individuals, but neither are they such common and easily obtainable skills that their acquisition and mastery can be accomplished simply by exposure to or mastery of an academic discipline, even of philosophy². Many of the failures we have experienced in education, particularly in the past century, can be traced to these last two erroneous assumptions: that a person who has studied and obtained a B.A., M.A. and/or Ph.D. has of necessity also acquired critical thinking skills: this is often the basis for the fallacies of the Argumenti ad Ignorantiam et Verecundiam³. Moreover, the extensive work and pre- and post-testing by Dr. Matthew Lipman's *Philosophy for Children Program* at Montclair State College, NJ, has presented strong evidence that early study of the simpler critical thinking skills can be accomplished and does in fact benefit the student at the early elementary levels. This is not so surprising as it might at first sound when we consider that during these same years children learn the skills of communicating within a particular language: a task which is much more difficult as the children grow older. And what they have learned early on and has been continually reinforced year after year, both in their school and in their culture, becomes incorporated (*or, infused*) into

² Indeed, the study of Philosophy as an academic discipline in no way necessarily implies that critical thinking skills have been acquired by the student.

³ of the Arguments from Ignorance and by Appeal to Authority.

their mental processes. As with many skills, and colloquially with bicycle riding, for example, *'Once you learn, you never forget.'* The same may be said of the critical thinking skills.

This first strategy will accommodate the coming generations during their school years, but cannot do the same for those who are now finishing their degrees, especially students in education, and for those who have finished their schooling and have already entered the work force (in which I strongly include house persons and care-givers). Differing needs and time frames require that these groups be handled differently.

SECONDARY and COLLEGE LEVEL:

Students now in high school and college will not have had the advantage of being exposed to critical thinking skills in their elementary years. And yet, because of their age, experience and their (presumably) more advanced cognitive development, they should be able to study and practice the skills of critical thinking while at the same time learning the content concepts of critical thinking. These students will need texts and courses designed for this purpose. These materials will only be needed, however, for the number of years it takes to bring up the elementary students who have been already exposed to critical thinking skills. When this happens, the text books can be re-written, leaving out the more elementary skills so as to concentrate on more abstract concepts and to present more complex issues for study and discussion.

John Chaffee's work at La Guardia College in New York is evidence of not only the success of such efforts, but also of its timeliness and the receptiveness of the students.⁴

ADULTS:

For adults who have already entered the working world (i.e. have left or finished their formal education), seminars, workshops and extended and continuing education classes can be set

⁴ New York Center for Critical Thinking & Language Learning
LaGuardia College, The City University of New York

up through local colleges, high schools and Critical Thinking (e.g., NCECT-affiliated) Centers. Here again, as for the high school and college students who did not have the benefit of exposure in elementary schools, materials and instruction must include skills practice and concept acquisition beginning at the elementary level. And, of course, these will need to be adjusted, and perhaps done away with completely, as persons receiving critical thinking instruction in their normal schooling come into the work place.

I think that the greatest need of this last group will be that of support. Most adults will need to make fundamental changes in their 'thinking habits': their reasoning processes must develop in a fashion which is perhaps not immediately welcomed or easy. It would be helpful if adults could form support groups and/or discussion networks.

Equally, it would be necessary that our social, political and economic institutions be supportive of their (*the adults*) efforts. However, it is almost impossible to not expect resistance at the upper levels of these institutions. It would be hard to imagine a critically thinking individual who is not also ethically involved with his/her life and so, too, all of the institutions which affect that life.

Without a doubt, many corporations find it 'easier' to not have critically thinking and ethically involved employees; in fact, I'm certain that many corporations exist successfully for the very reason that they do not. History has adequately shown the fate of 'whistle-blowers' and those who try to do a 'quality' job rather than a job done profitably, irresponsibly and often at the cost of quality. In too many cases, the 'quality' of safety, in production and end-use, is lost, often costing the lives of innocents and the loss of materials or facilities.

Businesses, large and small, will need to come to realize that their affairs, and ours, can no longer be run on the basis of 'planned obsolescence' or on the depletion of resources through unnecessary over-design production. The business world will come to see that its long-range success is compatible with critical thinking and, in fact, will likely depend upon it.

But, how can all of this come about?

CONCLUSIONS: SYNTHESIS AND IMPLEMENTATION

A first step toward implementation of a plan is to prioritize line-item objectives from which can be developed an overall strategic agenda. A successful program to infuse critical thinking skills into a culture involves a number of strategies which overlap and entwine themselves and make it necessary to proceed with several phases concurrently.

For example, if the initial premises are accepted, then there is a strong argument for the conclusion that instruction in critical thinking skills should be begun as soon as possible for our children: both at home *and* at school. To do this requires that we, as parents, teachers and administrators be trained as critical thinkers, with additional training in being able to cultivate these skills in our children. Today's adults have not had the benefit of education of and with critical thinking skills. Where are they to obtain this training, and at whose expense? Must the teachers give up class time, and the parents work time, to attend special workshops? Who will teach the teachers how to think critically and how to teach critical thinking?

To answer this question, I add one more premise to my earlier syllogism: **the sixth premise** is that the schools, both public elementary and secondary as well as the two- and four-year colleges *are not now equipped* to handle this 'additional' training.

For this reason, and because of the red tape committees existing in school bureaucracies which are necessary for adding a new course, not to mention officially requiring a particular course, I think that the most expedient and efficient solution would be to set up centers that initiate and conduct the training programs, workshops and seminars. Such an arrangement would leave the centers largely free from political and economic pressures, as well as allowing them the freedom to develop programs in whatever socio-cultural and economic situations lie at hand. Thus, a series of programs could be developed as a succession of workshop/seminars for particular businesses. The centers would be able to develop materials to cover particular critical thinking skills involved in strategic corporate planning, research and development, marketing, personnel and public relations.

Additionally, such a center could operate as a networking center for information on critical thinking issues: conferences, workshops, seminars, papers, books, articles, teaching methodologies, pedagogical databases, discussion groups (**SIG'S: Special Interest Groups**), information on and funding for research and in-field program implementation. **The target population is immense and the applications virtually endless.**

POSTSCRIPT

Acting on the belief in the truth of the above, **The Ohio Center for Critical Thinking Instruction** was incorporated in January of 1994. The center offers classes for area secondary schools, colleges and universities for students, educators, administrators and parents (present and future). Classes will also be offered at the community and business levels through whatever avenues and machinations exist locally. But first and foremost, **OCCTI** will be a teacher's center, dedicated to the development of critical thinking as a professional skill of the teacher and as an essential and urgent component of what education must, of necessity, be. Popular support is curious, excited ... and growing!